

Keeping Plastics in the Circular Economy

Recommendation for Recycled Content Minimum for Plastic Bags
Updated May 21, 2019 | www.recyclemorebags.com

Last year, the Chinese government enacted a ban on the import of certain recyclables into their country. After many years of relying on Chinese markets as the primary outlet for low-value recyclable commodities, the global recycling industry has been struggling to find new end-markets. While high-value commodities like cardboard or water bottles can still be sold domestically, lower-value commodities like plastic bags are at the greatest risk of being landfilled or incinerated.

With limited markets, depressed pricing and uncertainty for the future, this is a difficult time for the recycling industry. However, today's challenges present the opportunity to reimagine how we should manage materials that used to be shipped overseas. To support the creation of local, long-term end-markets, ***we, the cosignatories of this call to action, are recommending government legislation and procurement policies to require 20% post-consumer recycled (PCR) content in garbage bags and plastic carryout bags by 2025.***

Recommended Minimum PCR in Garbage Bags:

- 10% by 2020
- 15% by 2022
- 20% by 2024

Recommended Minimum PCR in Plastic Carryout Bags:

- 10% by 2021
- 15% by 2023
- 20% by 2025

Chinese Import Ban

On January 1, 2018, China officially banned the import of 24 types of recyclable commodities, including bales of plastic bags. Suddenly, the Chinese market, which had previously imported half of the world's recycled paper¹ and half of North America's recycled plastic bags,² was closed. Several countries have followed China's lead with Vietnam, Malaysia and Thailand ratifying similar import bans on recyclables. Preliminary analysis by More Recycling has estimated that **600 million pounds of plastic bags** collected for recycling in North America in 2018 was landfilled or incinerated due to lack of end-markets.³ The North American recycling industry cannot wait for the uncertain return of Asian recycling markets; now is the time to fill the void and invest in domestic recycling infrastructure.

Decline in Prime Resin Pricing

Although the general public has become more aware of the problem of plastic pollution over the last year, this awakening has not yet slowed the global growth of plastic production. For example, ExxonMobil has recently announced that it plans to pump 25% more oil in 2025 than it did in 2017.⁴ With more oil available, more plastic will be produced, and virgin plastic pricing will continue to drop. In a market flooded with virgin plastic, it will be very difficult for recycled plastic to compete.

Developing a Circular Economy in North America

To transition from a linear economy to a circular economy, the demand for recycled content must match the production of recyclable materials recovered from the residential and commercial sectors. A circular economy prioritizes the reuse of what is already available over the extraction and disposal of natural resources. Unfortunately, the traditional linear

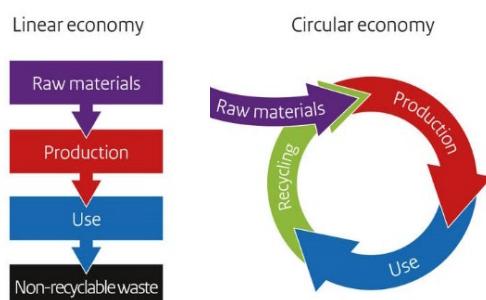


Figure 1. Linear vs. circular economy model.
[Government of the Netherlands.](http://www.recyclemorebags.com)

¹ De Freitas-Tamura, Kimiko. 2018. Plastics Pile Up as China Refuses to Take the West's Recycling. [NY Times](http://www.nytimes.com).

² More Recycling. 2018. 2016 National Post-Consumer Plastic Bag & Film Recycling Report. [MoreRecycling.com](http://www.morerecycling.com).

³ More Recycling. Personal communication, Feb. 27, 2019.

⁴The truth about big oil and climate change. Feb. 9, 2019. [The Economist](http://www.economist.com).

economic model still prevails. The oil and prime resin industries in North America are highly subsidized, totalling over \$40 billion per year in fossil fuel extraction subsidies.^{5,6} For example, a new plastic production facility being built in Alberta has received \$200 million in government funding to produce polypropylene (a material which could be made from post-consumer recyclables) from natural gas.⁷ Comparable incentives for the recycling industry do not exist.

Since residential recycling programs began in North America, there has been a narrow policy focus on increasing diversion rates. Engaging residents to participate in curbside recycling programs was a necessary effort to provide a supply for the recycling industry, but an equivalent focus on “demand” has not yet been seen. International brands are increasingly making commitments to improve the recyclability of their packaging, but those promises are not always accompanied by a corresponding commitment to include recycled content in their packages. While this market demand may eventually develop organically through consumer demand, legislation or public commitments to use recycled content can push the circular economy towards a lasting reality.

Why Focus on Plastic Bags?

In theory, plastic bags are made of a highly recyclable resin that could be recycled many times without losing material integrity. In reality, most plastic bags in use today will not go on to a second life through recycling. The lack of demand for high-value applications for plastic resin created from recycled plastic bags has stunted the development of the plastic bag recycling industry in North America. For years, recycled plastic bags have been limited to more durable end-use applications such as composite lumber. Use of recycled content in more sensitive, high-performance applications, like plastic bags, has been rare. This limited demand, in turn, has meant limited investment in processing capacity to convert recycled bags back into a resin product that can be used in manufacturing.

While there are challenges to creating new plastic bags with recycled content, there is no doubt that it can be done. For example, Ontario-based EFS-plastics Inc. has been supplying 100% PCR plastic resin to manufacturers like Inteplast Group to create plastic bags with recycled content ranging from 10-25% PCR content. While Inteplast Group has made a commitment to invest in recycling, their dedication is not yet the industry standard. We believe a recycled content mandate would encourage other producers to follow what EFS-plastics, Inteplast Group and others have already shown is possible.

In today's culture, plastic bags have gained notoriety for being a symbol of pollution and wastefulness. In a 2017 Ocean Conservancy Report on coastal cleanups, they found that plastic bags are among the top ten most common items found littering shorelines.⁸ Creating a strong market demand for PCR plastic bags could help reduce their presence as pollution. Including recycled content in plastic bags would also significantly reduce carbon emissions, as 1 tonne of recycled plastic is approximately equivalent to a reduction in 1.45 tonnes of carbon emissions.⁹ For example, if all plastic bags sold in the Canadian marketplace used 20% recycled content, carbon emissions would be reduced by 38,100 tonnes per year – the equivalent of 29,700 cars taken off the road.

Approximately 290 million pounds of plastic bags used in Canada on an annual basis ¹⁰			
Impact if PCR content was used in all Canadian plastic bags:			
PCR Level	Recycled resin needed ⁸	Carbon emissions avoided ¹¹	Equivalent reductions ⁹
10%	13,200 metric tonnes	19,000 metric tonnes	Emissions from 14,800 cars
15%	19,700 metric tonnes	28,600 metric tonnes	Emissions from 22,200 cars
20%	26,300 metric tonnes	38,100 metric tonnes	Emissions from 29,700 cars

⁵ Global Subsidies Initiative. Unpacking Canada's Fossil Fuel Subsidies. [International Institute for Sustainable Development](#).

⁶ Chen, Han. 2018. G7 Countries Waste \$100 Billion a Year on Coal, Oil, and Gas. [NRDC](#).

⁷ The Canadian Press. 2017. Inter Pipeline green-lights \$3.5B petrochemical project to produce plastic. [Global News](#).

⁸ Ocean Conservancy. 2017. Together for Our Oceans: International Coastal Cleanup 2017 Report. [International Coastal Cleanup](#).

⁹ Zmak, Irena & Hartman, Carina. 2017. Current state of the plastic waste recycling systems in the European Union and in German. [Technical Journal](#). 11, 3: 138-142.

¹⁰ Canadian Plastics Industry Association. Personal communication, November 1, 2018.

¹¹ Greenhouse Gas Equivalencies Calculator. 2017. Energy & Environment Department. [United States EPA](#).

Proposed Pathways to Enact Recycled Content Mandates

In the wake of a collapsed recycling export market and rising public concern about plastic waste, we are calling for increased commitments to use PCR film resin. We encourage all levels of government to consider how they can increase their use; specifically, we are highlighting two mechanisms to increase the use of PCR film resin: 1) government legislation and 2) green procurement policy.

1. Government legislation requiring PCR film

We believe recycled content mandates are a direct, market-driven approach to encourage the growth of the recycling industry. While some stakeholders in the industry have advocated for voluntary recycled content commitments, they are an unlikely driver for real change. Some companies may choose to use recycled plastic to meet their corporate social responsibility goals of reducing waste or carbon emissions, but those goals often take a back seat to the financial bottom line.

Recycled content mandates have been evaluated and implemented in many jurisdictions across North America and internationally. Manufacturers producing packaging for these marketplaces have had to adopt new procedures and find new suppliers to meet governments' requirements. The following legislation has provided strong market signals to plastic film recyclers to invest in additional capacity:

- Since 1990, the state of California has had legislation requiring all trash bags sold in the state to include 10% post-consumer resin.¹²
- As a clause in California's state-wide bag ban, all reusable film bags purchased at checkout in retail stores must include 20% PCR content since 2016 and must include 40% by 2020.¹³
- In March, Washington State Senate also passed a statewide bag ban which included a clause that all reusable film bags purchased at checkout in retail stores must include 40% PCR content by 2020. This bill is currently pending house approval.¹⁴

Where possible, we ask other government entities to mandate the use of PCR content in garbage bags and/or plastic carryout bags sold within their jurisdiction.

2. Green procurement policy

Governmental bodies have significant purchasing power – 13% of total GDP in Canada and 9 % in United States.¹⁵ This power can help drive down costs, but it also presents the opportunity to demand environmentally preferred goods and services. While many green procurement policies will call for the use of recycled content in printing paper, it is less common to see this required in garbage bags. We specifically call upon all levels of government to require their suppliers to source garbage bags with minimum PCR content.

We are proposing a 20% PCR content minimum as a realistic goal that would have a significant impact on how recycled plastic bags are used. While a lower target would be easier for manufacturers to integrate from one day to the next, it would be unlikely to lead to a lasting commitment to use increasing amounts of post-consumer content. We believe that a 20% goal is ambitious enough to require investment to be made in recycling infrastructure. While any commitment to recycled content is certainly a step in the right direction, we believe the industry is ready to handle a more substantial step towards circularity.

Recommendation

In summary, we are requesting that you consider the following recommendation:

- Whether it be accomplished through legislation or procurement policy, we recommend increasing the use of PCR content in garbage bags and plastic carryout bags to at least 20% by 2025. In order

¹² Recycled Content Trash Bag Program. [CalRecycle](#).

¹³ Single-Use Carryout Bag Ban (SB 270). [CalRecycle](#).

¹⁴ SB 5323 – 2019-20. [Washington State Legislature](#).

¹⁵ Government at a Glance – 2017 edition: Public procurement. [OECD](#).

to meet this goal, we proposed a stepped timeline for both garbage bags (10% by 2020, 15% by 2022, 20% by 2024) and plastic carryout bags (10% by 2021, 15% by 2023, 20% by 2025).

This recommendation specifically encourages the use of “post-consumer” recycled content, which includes plastic that was used by a consumer for its intended purpose. There are a number of sources of post-consumer film including plastic bags brought back to a store drop-off, plastic bags sorted at a material recovery facility, agricultural film, boat wrap and post-commercial pallet wrap. We recommend verifying the use of PCR content through a third-party certification firm. Post-industrial recycled content produced as a by-product of manufacturing operations should not be included in this definition.

Again, we believe these recommended actions will help address several key issues. We believe commitments to a recycled content minimum will:

- Lessen reliance on export markets for recyclables produced in North America,
- Reduce carbon emissions by replacing the use of virgin plastic,
- Reduce plastic litter by enhancing plastics’ value throughout its full life cycle, and
- Boost the development of a lasting circular economy in North America.

The following co-signatories endorse this call to action:

